Amendments to the Claims

The following listing of claims will replace all prior versions and listing of claims in the application.

What is claimed is:

1. (currently amended) A motion controller having an engineering system and a run time system, and that functionally combines classic tasks of a PLC and of a numerical controller, comprising:

a uniform run level model comprising a plurality of run levels of different types having differing priorities, and further the plurality of run levels comprising a plurality of user and system-levels having differing priorities.

a data source for containing description information for at least one of a the group consisting of system variables, alarms and commands; and

a converter coupled to the data source and to at least , the engineering system; and

wherein the data source provides description information to the engineering system via the converter;

the motion controller being further configured to permit a technology packet to be loaded into at least one of the engineering and run time systems, to provide the system variables with current data for a technical process for the run time system, and to permit input to be made via a user interface of the engineering system.

2. (original) The motion controller according to claim 1, wherein relevant documentation information is forwarded by the converter from the data source to an output medium.

3. (original) The motion controller according to claim 1, further comprising the following run levels;

a) a position-control level, comprising an associated clocked system-level and user-level,

b) an interpolator level, comprising the associated clocked system-level and user-level,

c) an event system level for events requiring a response,

d) a user-level for asynchronous errors,

e) a third user-level that is freely plan-able by the user in accordance with specific requirements, for one of the group consisting of alarm tasks, event tasks, control tasks and cyclical tasks,

f) a group of levels, formed from a series of motion sequences, free cycles, and other low-priority system tasks, for background processing, wherein a level group for real-time processing comprises run levels a to e.

4. (original) The motion controller according to claim 1, wherein the technology packet comprises:

a) code parts that represent controller specifics for the run time system; and

b) a configuration part that exhibits the allocation of those code parts to each of the system-levels, as well as the sequence of their processing, wherein information relating to the configuration part is forwarded as needed to the engineering system.

5. (original) The motion controller according to claim 4, wherein the information of the configuration part of a technology packet is delivered to the run time system and the engineering system by use of the data source and the converter.

6. (currently amended) The motion controller according to claim 4, therein each technology packet comprises at least one technology object ~~types~~ type for the run time system.

7. (previously amended) The motion controller according to claim 4, wherein information presented on the user interface comprises at least one of the group consisting of operating parameters, programming language features and declaration parts allocated to the code parts.

8. (new) A motion controller having an engineering system and a run time system, and that functionally combines classic tasks of a PLC and of a numerical controller, comprising:

a uniform run level model comprising a plurality of run levels of different types having differing priorities, the plurality of run levels comprising a plurality of user and system-levels having differing priorities;

a data source for description information for at least one of the group consisting of system variables, alarms and commands; and

a converter coupled to the data source, the engineering system, and the run time system, the converter generating, based on input received from the data source, parameterization information for the engineering system and run time system, the generated parameterization information transferred to the engineering system and run time system, such that the generated parameterization information is internally consistent in the motion controller.

9. (new) The motion controller according to claim 8, further comprising a technology packet for loading into at least one of the group consisting of the engineering system and run time system, the technology packet providing a user with the opportunity of expanding the functionality of the controller.

10. (new) A combined PLC/NC controller that functionally combines tasks of a process controller and a motion controller, the PLC/NC controller comprising a uniform run level model comprising a plurality of run levels of different types having differing priorities, the plurality of run levels configured to minimize communication between the tasks of the process controller and motion controller by arranging the tasks of the process controller and motion controller within the plurality of run levels of different types having different priorities, such that programming of the PLC/NC controller is facilitated by a uniform programming language.